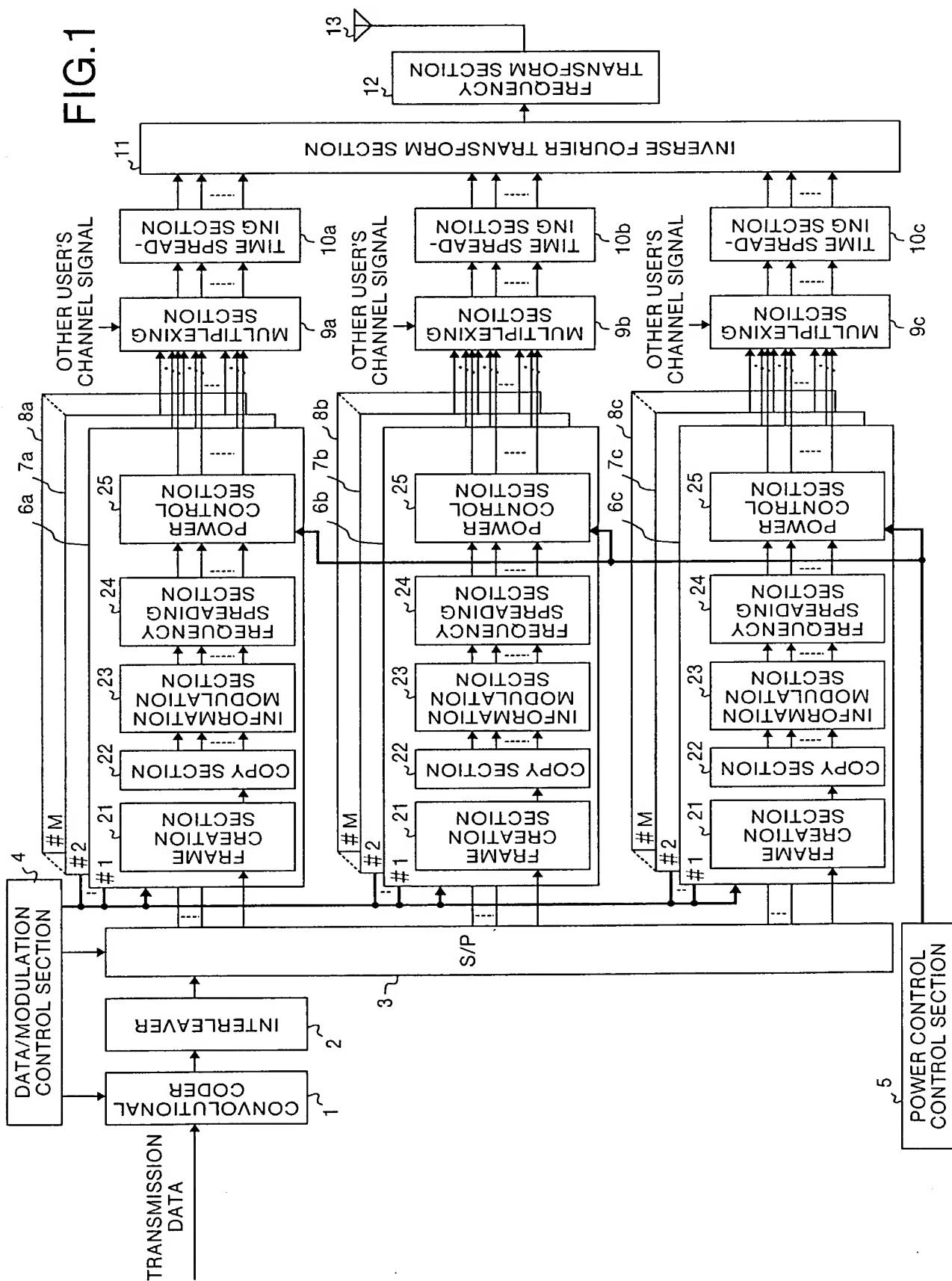
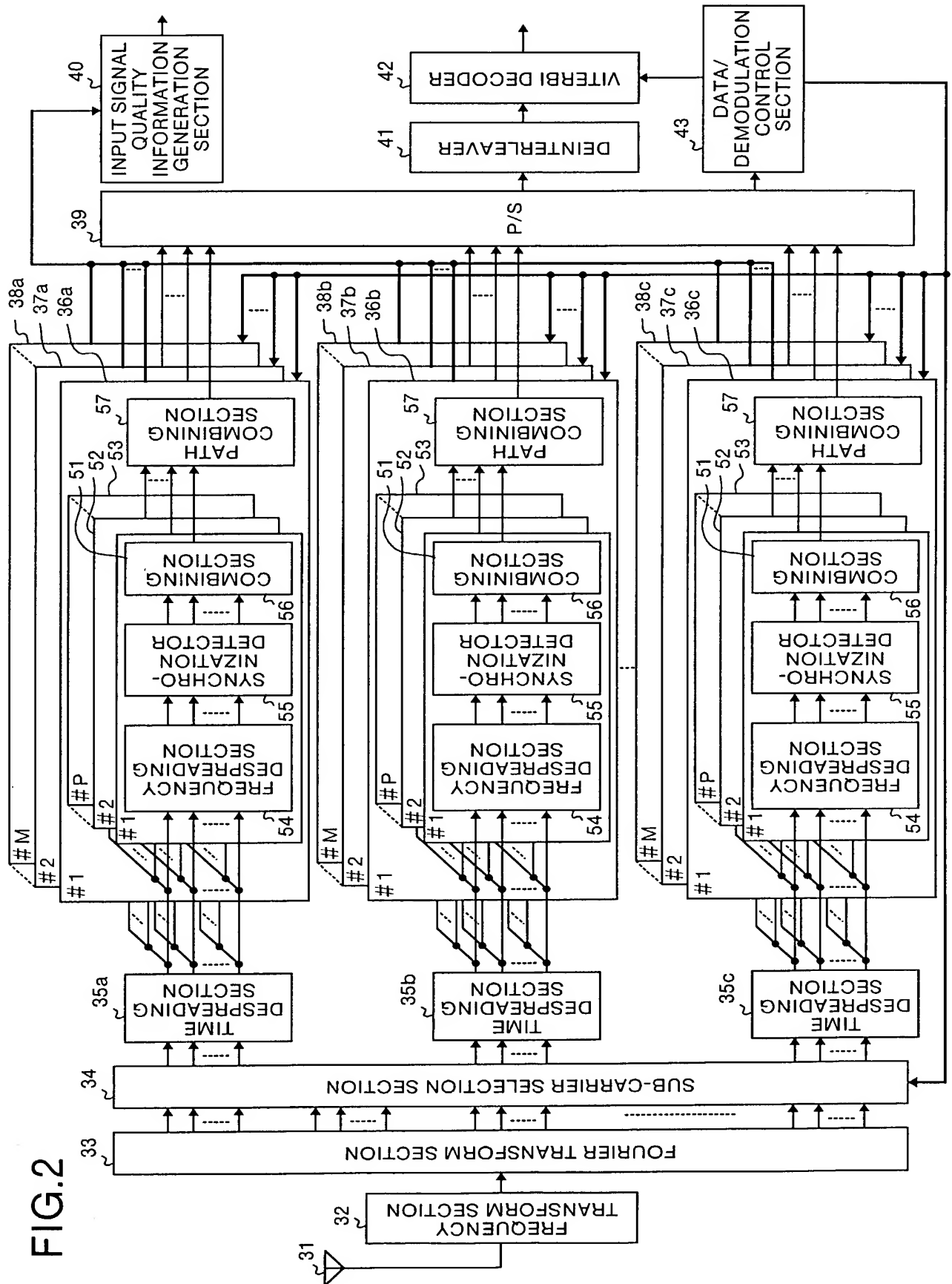


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FIG.3

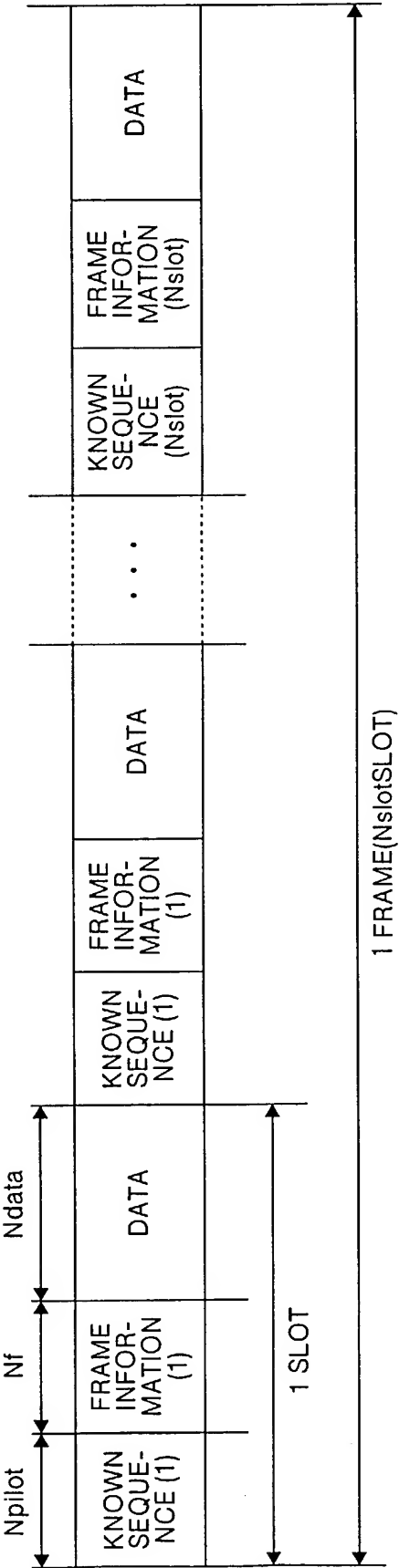


FIG.4

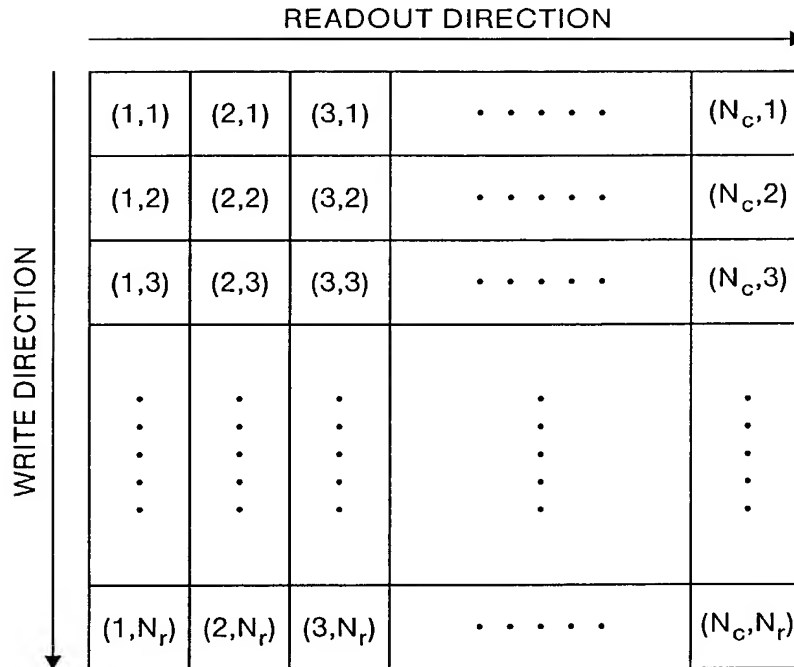
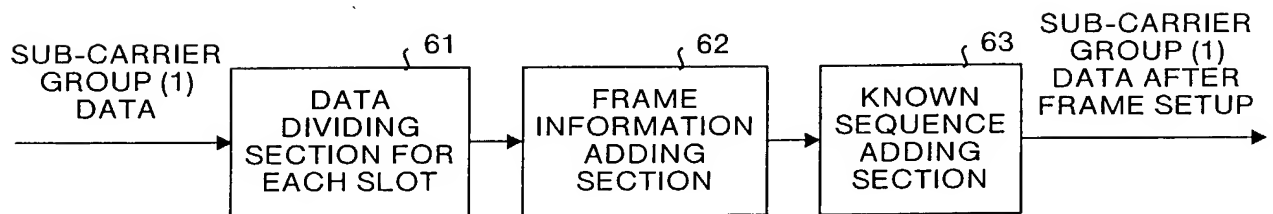


FIG.5



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FIG.6

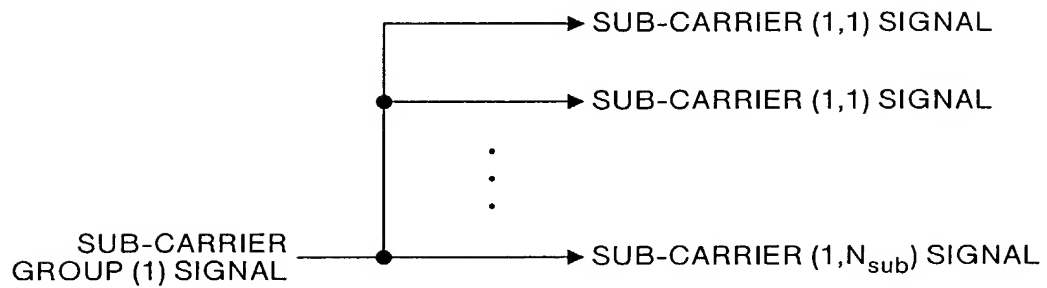


FIG.7

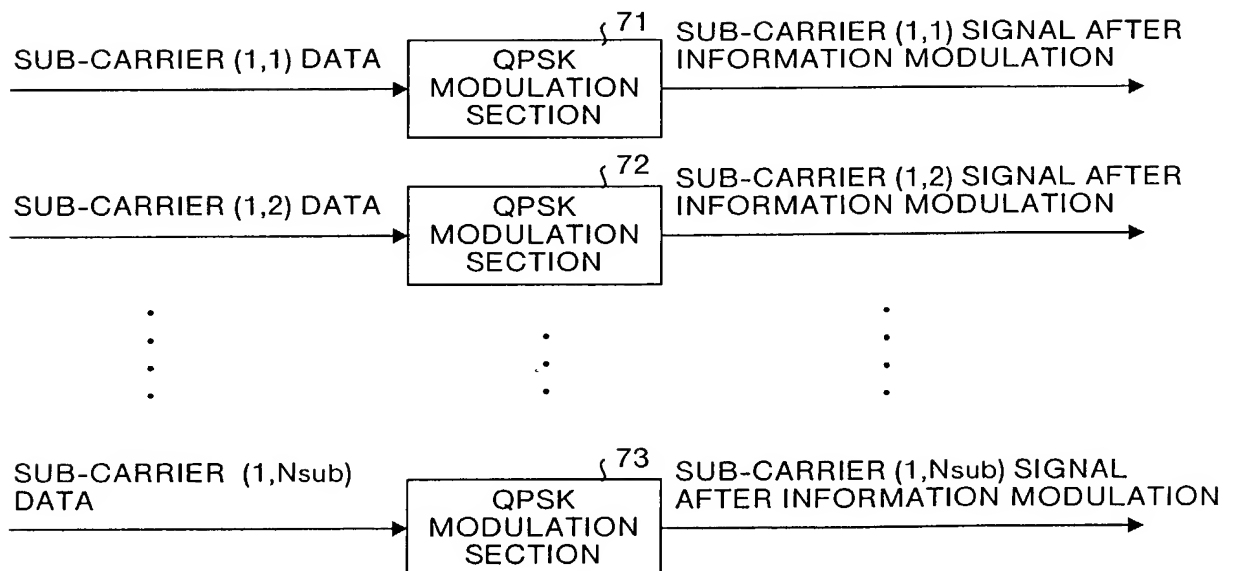
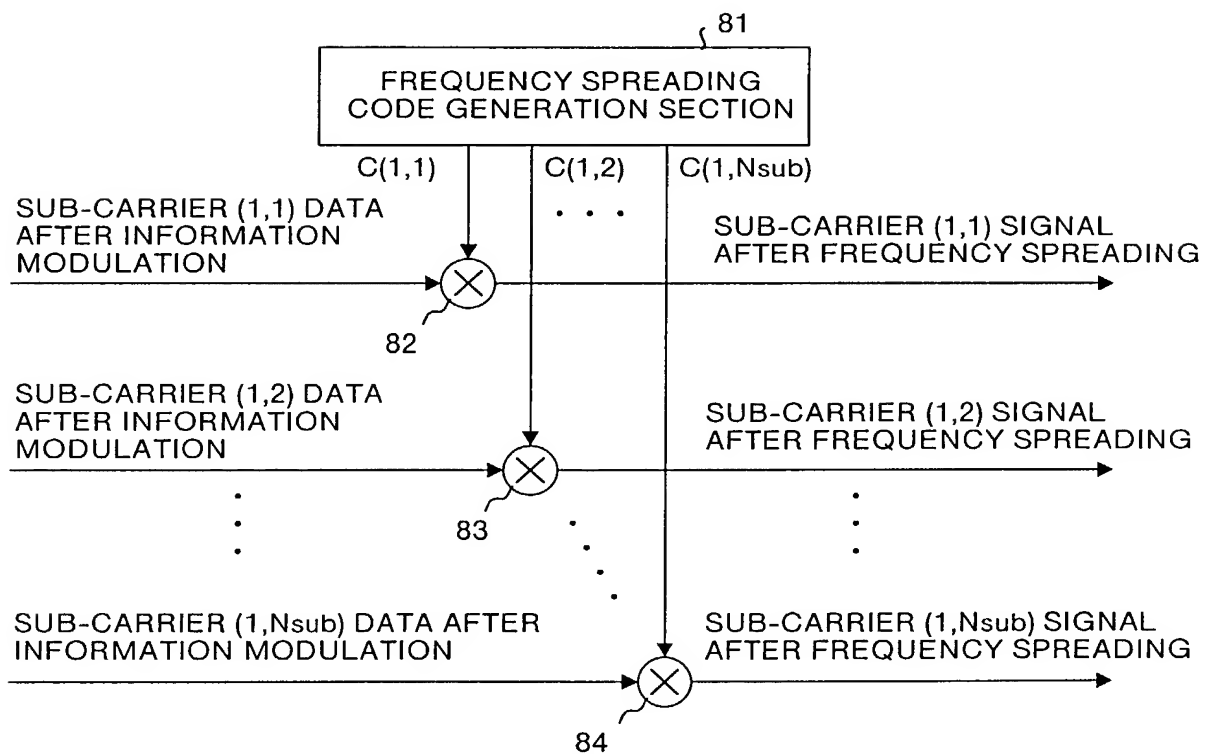


FIG.8



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FIG.9

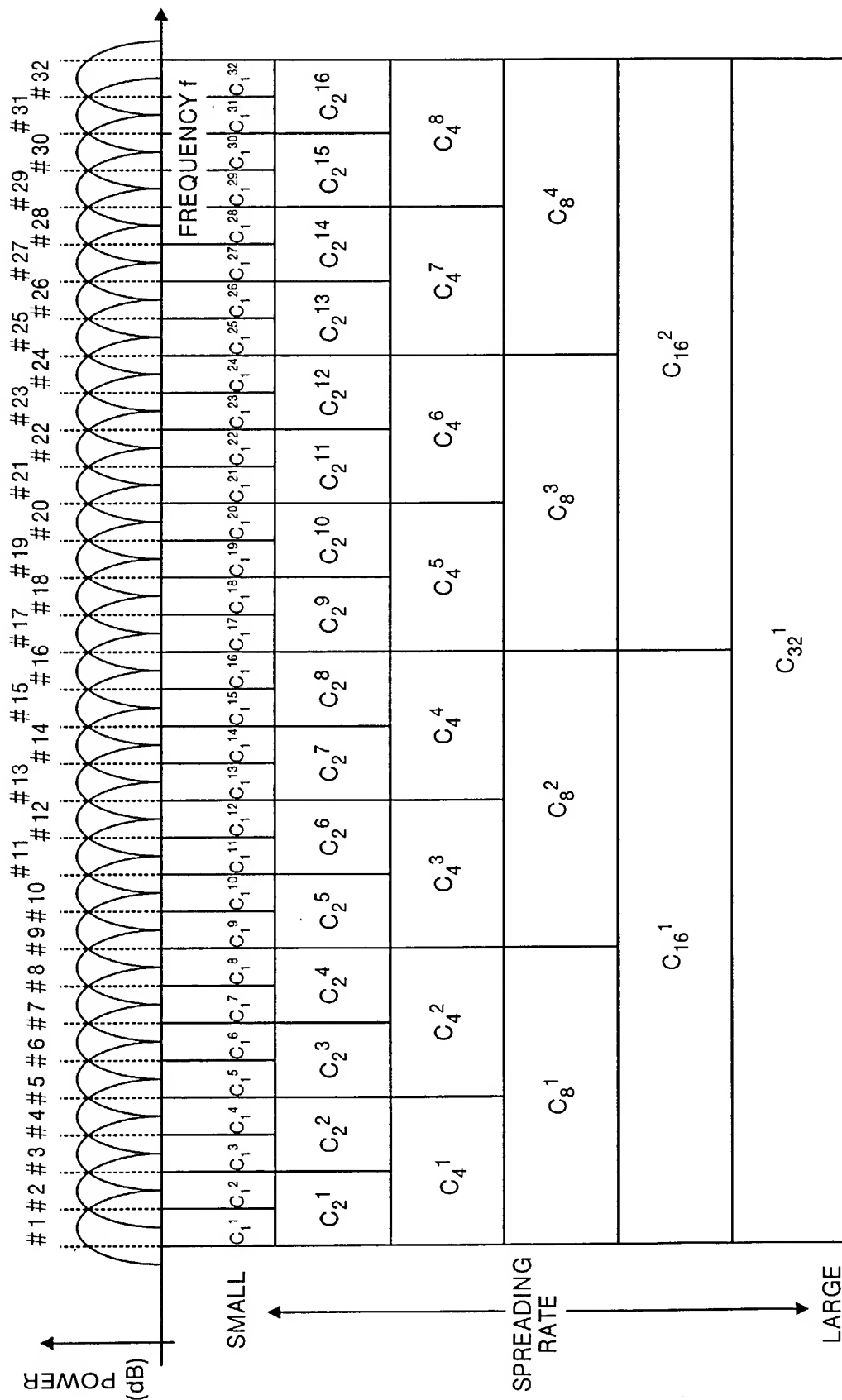


FIG.10

(a) $C_1^{h=1}, h=1 \sim 32$

(b) $C_2^i = \begin{bmatrix} C_{2,1}^i \\ C_{2,2}^i \end{bmatrix} = \begin{bmatrix} 1 & 1 \\ 1 & 0 \end{bmatrix}, i=1 \sim 16$

(c) $C_4^j = \begin{bmatrix} C_{4,1}^j \\ C_{4,2}^j \\ C_{4,3}^j \\ C_{4,4}^j \end{bmatrix} = \begin{bmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 0 & 0 \\ 1 & 0 & 1 & 0 \\ 1 & 0 & 0 & 1 \end{bmatrix}, j=1 \sim 8$

(d) $C_8^k = \begin{bmatrix} C_{8,1}^k \\ C_{8,2}^k \\ C_{8,3}^k \\ C_{8,4}^k \\ C_{8,5}^k \\ C_{8,6}^k \\ C_{8,7}^k \\ C_{8,8}^k \end{bmatrix} = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 & 1 & 1 & 0 & 0 \\ 1 & 1 & 0 & 0 & 0 & 1 & 1 & 1 \\ 1 & 0 & 1 & 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 0 & 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 1 & 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 & 0 & 1 & 1 & 0 \end{bmatrix}, k=1 \sim 8$

(e) $C_{16}^m = \begin{bmatrix} C_{16,1}^m \\ C_{16,2}^m \\ C_{16,3}^m \\ C_{16,4}^m \\ C_{16,5}^m \\ C_{16,6}^m \\ C_{16,7}^m \\ C_{16,8}^m \\ C_{16,9}^m \\ C_{16,10}^m \\ C_{16,11}^m \\ C_{16,12}^m \\ C_{16,13}^m \\ C_{16,14}^m \\ C_{16,15}^m \\ C_{16,16}^m \end{bmatrix} = \begin{bmatrix} C_{8,1}^k & C_{8,1}^k & C_{8,2}^k & C_{8,2}^k & C_{8,3}^k & C_{8,3}^k & C_{8,4}^k & C_{8,4}^k & C_{8,5}^k & C_{8,5}^k & C_{8,6}^k & C_{8,6}^k & C_{8,7}^k & C_{8,7}^k & C_{8,8}^k & C_{8,8}^k \\ C_{8,1}^{k'} & C_{8,1}^{k'} & C_{8,2}^{k'} & C_{8,2}^{k'} & C_{8,3}^{k'} & C_{8,3}^{k'} & C_{8,4}^{k'} & C_{8,4}^{k'} & C_{8,5}^{k'} & C_{8,5}^{k'} & C_{8,6}^{k'} & C_{8,6}^{k'} & C_{8,7}^{k'} & C_{8,7}^{k'} & C_{8,8}^{k'} & C_{8,8}^{k'} \end{bmatrix}, m=1 \sim 2, k=1 \sim 4$

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FIG.11

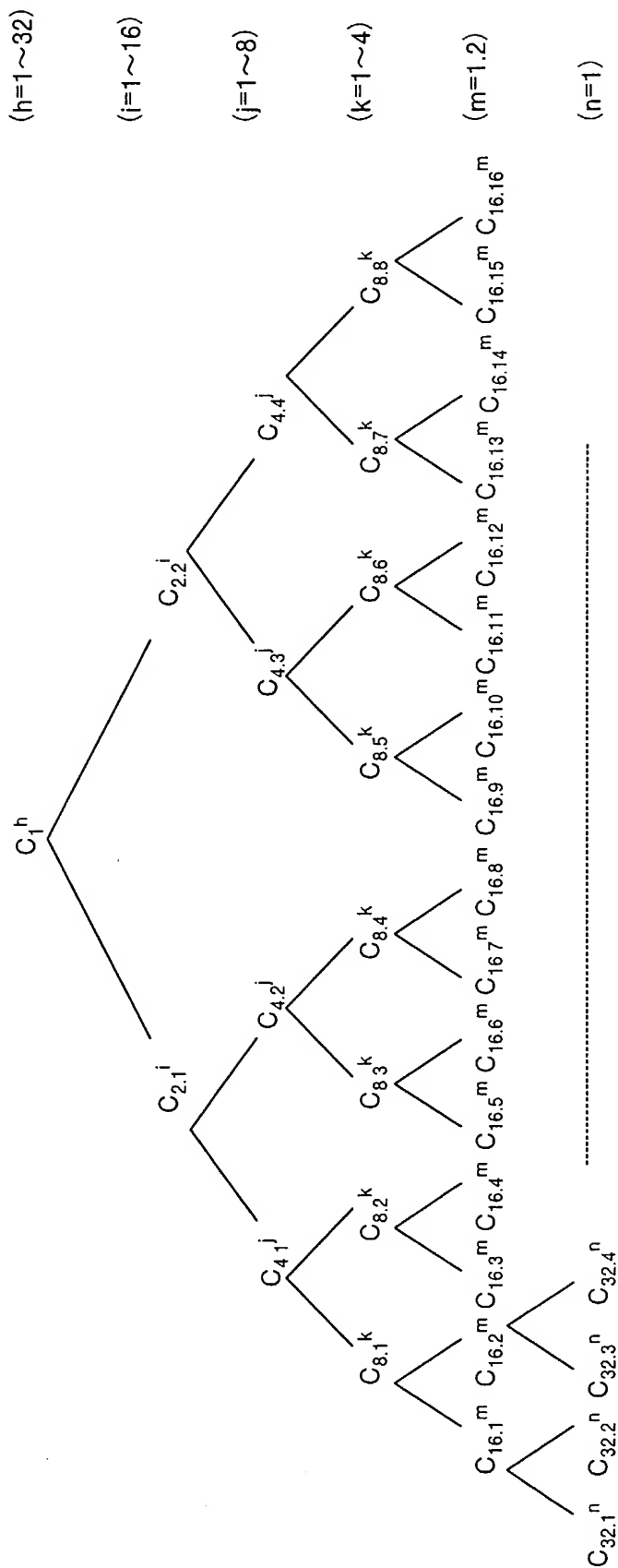


FIG.12

```
graph TD
    S1[REQUEST CHANNEL ALLOCATION ~S1] --> S2[SET CODE RATE OF ERROR CORRECTION ~S2]
    S2 --> S3[<FIRST STAGE> REQUEST SETUP OF NUMBER OF SUB-CARRIER GROUP, FREQUENCY SPREADING RATE, FREQUENCY SPREADING CODE AND NUMBER OF CODE MULTIPLEXES ~S3]
    S3 --> S4{IS SETUP POSSIBLE? S4}
    S4 -- "Yes : SET" --> S5[DETERMINE ALLOCATION OF SUB-CARRIER GROUP NUMBER, FREQUENCY SPREADING CODE AND NUMBER OF CODE MULTIPLEXES ~S5]
    S4 -- "No : RESET" --> S6[<SECOND STAGE> FREQUENCY SPREADING RATE, FREQUENCY SPREADING CODE ~S6]
    S6 --> S7{IS SETUP POSSIBLE? S7}
    S7 -- "Yes : SET" --> S5
    S7 -- "No : RESET" --> S8[<THIRD STAGE> REQUEST SETUP OF FREQUENCY SPREADING CODE AND NUMBER OF CODE MULTIPLEXES ~S8]
    S8 --> S9{IS SETUP POSSIBLE? S9}
    S9 -- "Yes : SET" --> S5
    S9 -- "No : RESET" --> S10[FAILURE IN CHANNEL ALLOCATION ~S10]
```

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FIG.13

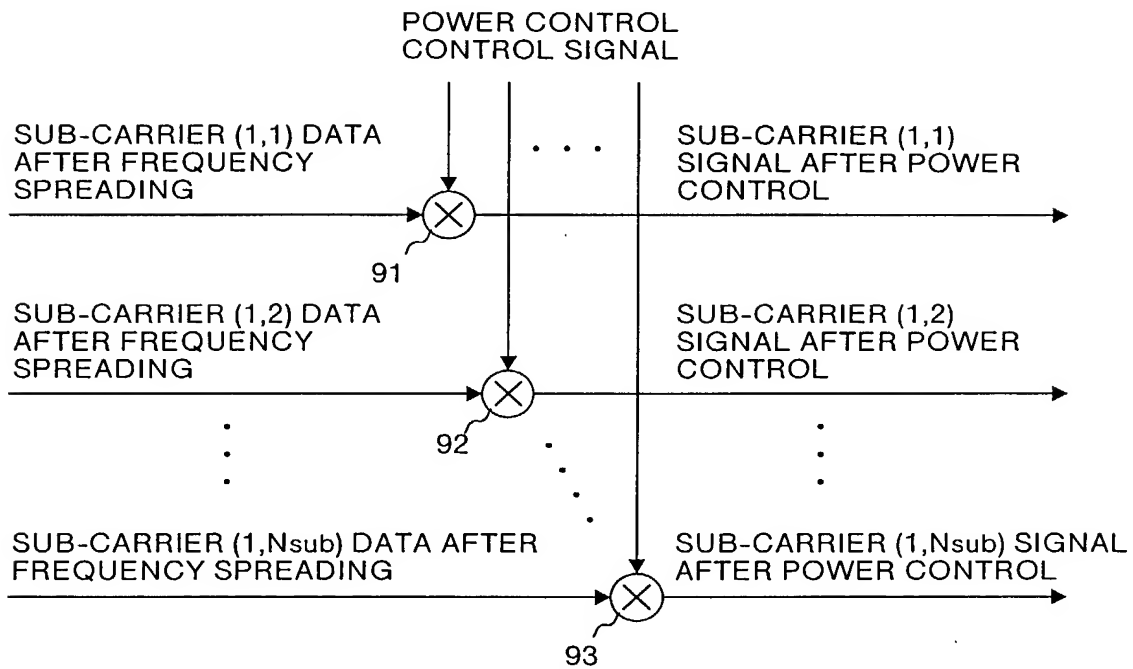


FIG.14

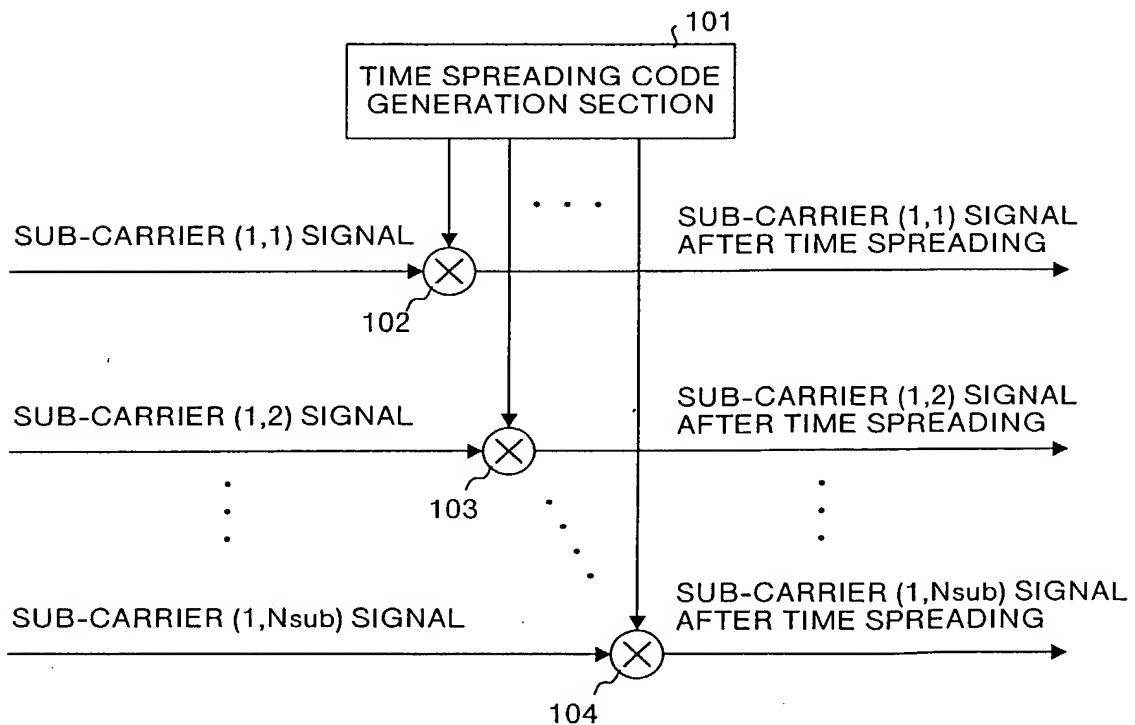


FIG.15

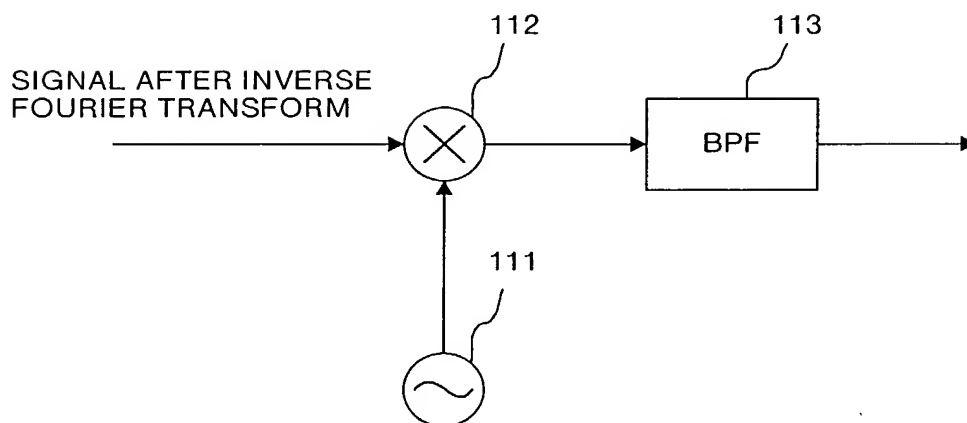


FIG.16

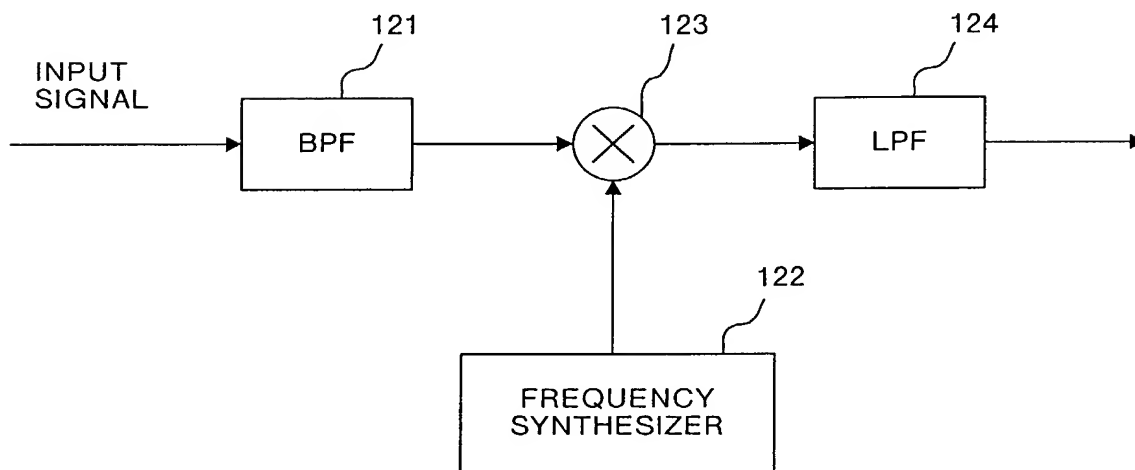


FIG.17

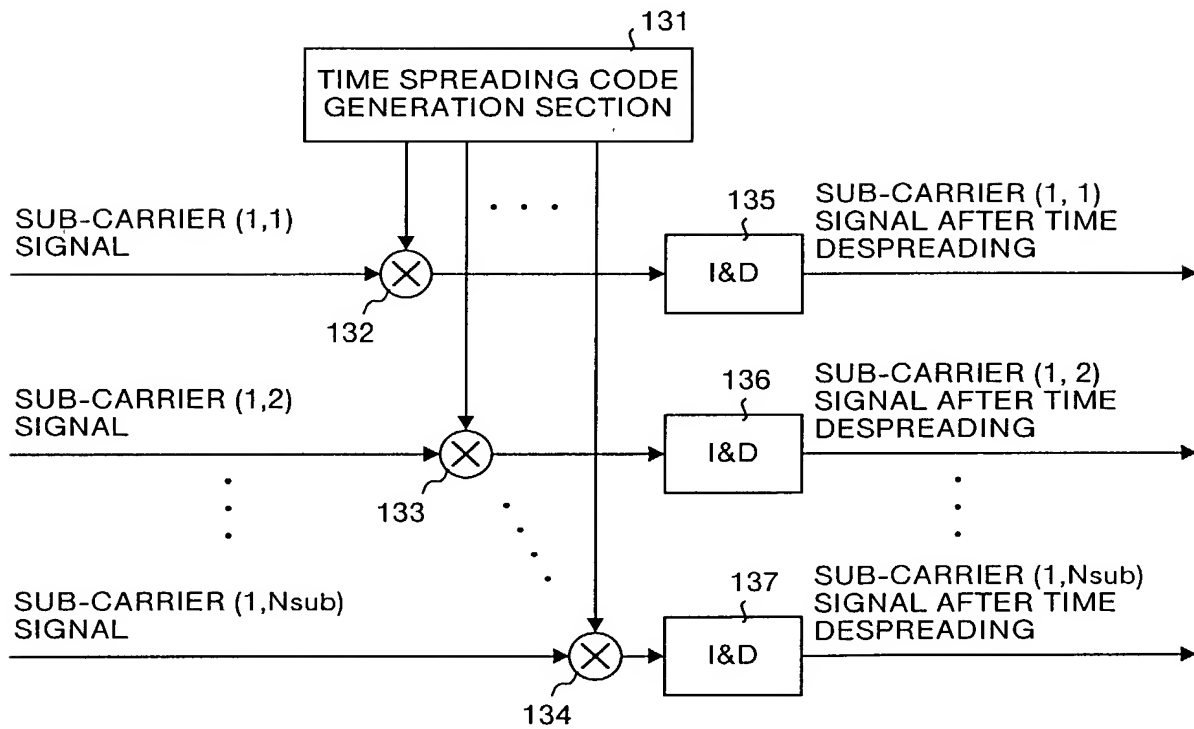


FIG.18

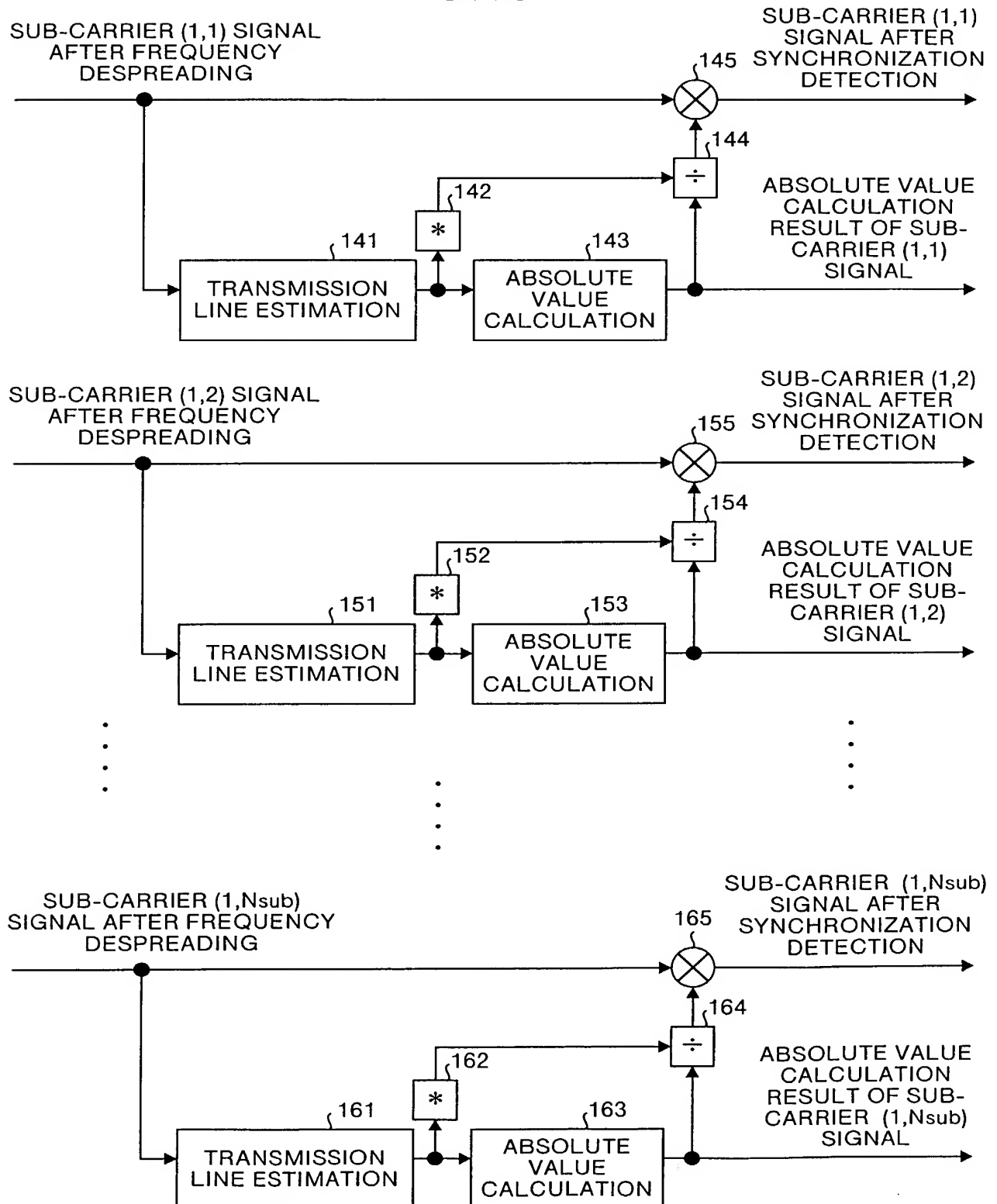


FIG.19

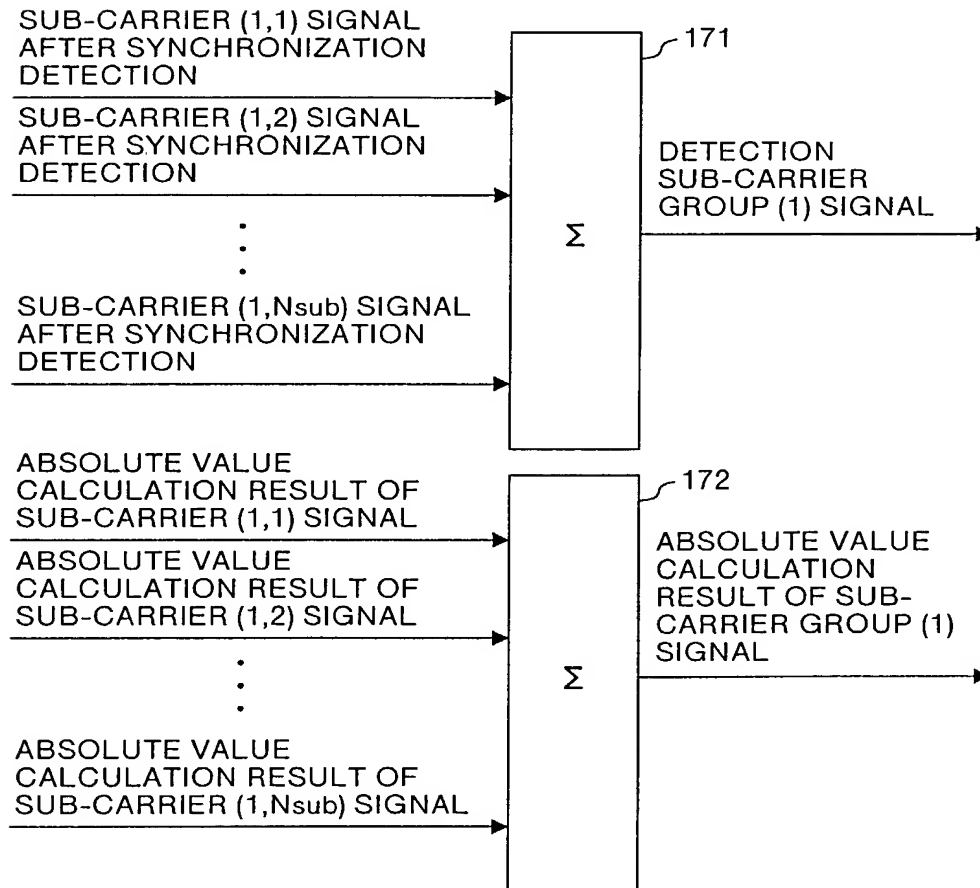


FIG.20

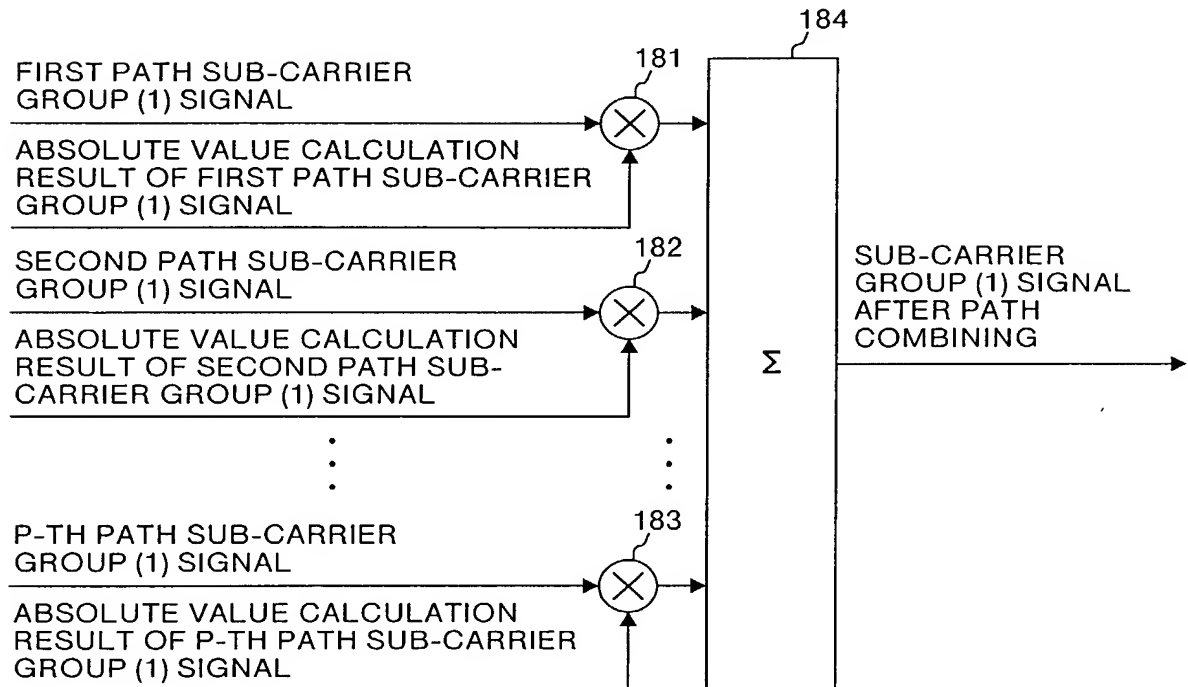


FIG.21

WRITE DIRECTION →					
READOUT DIRECTION ↓	(1,1)	(2,1)	(3,1)	(N _c ,1)
	(1,2)	(2,2)	(3,2)	(N _c ,2)
	(1,3)	(2,3)	(3,3)	(N _c ,3)

	(1,N _r)	(2,N _r)	(3,N _r)	(N _c ,N _r)

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FIG.22

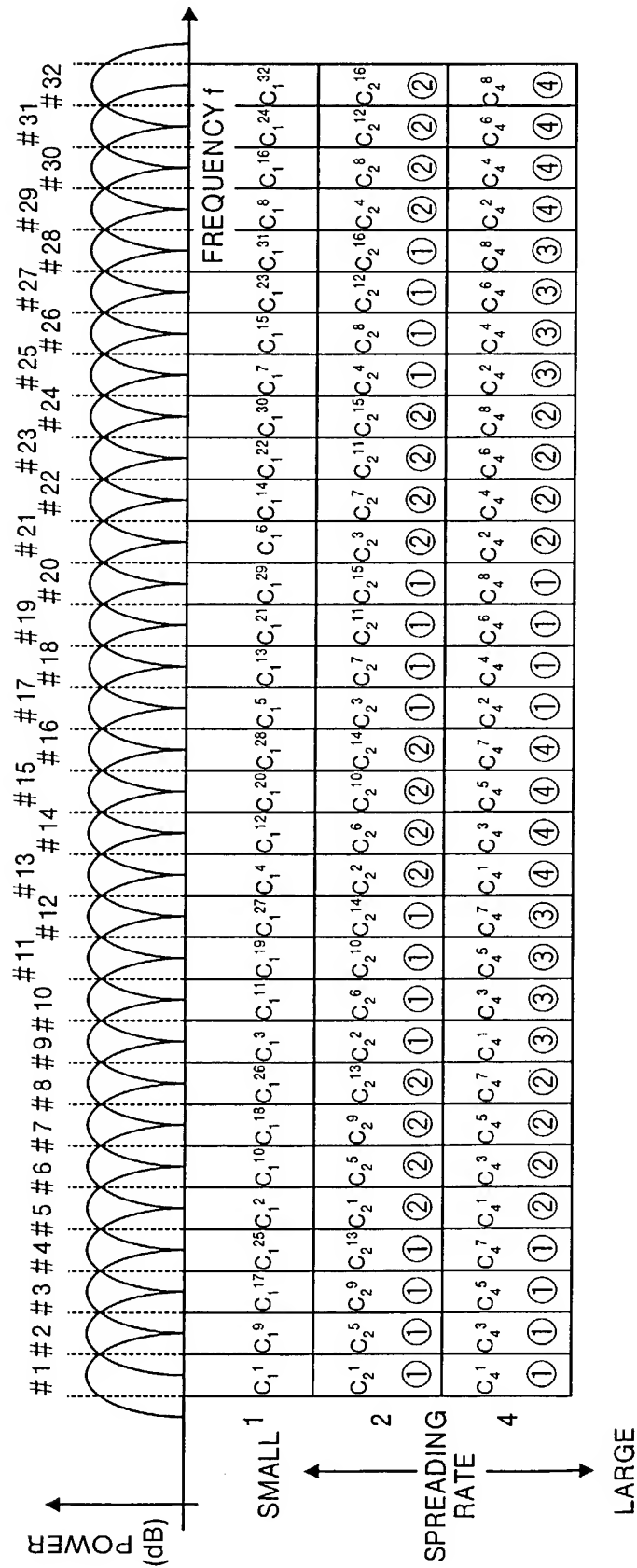


FIG.23

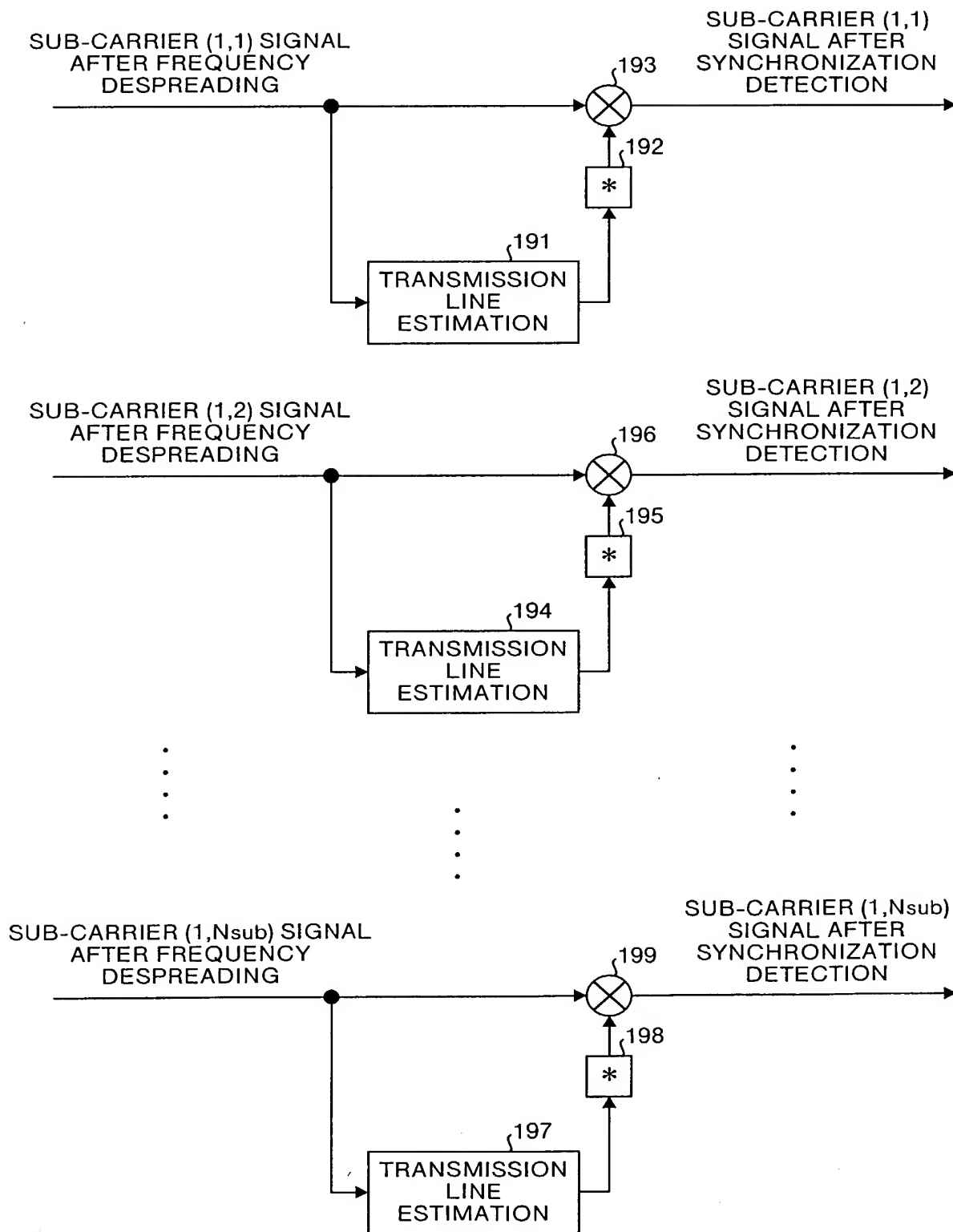


FIG.24

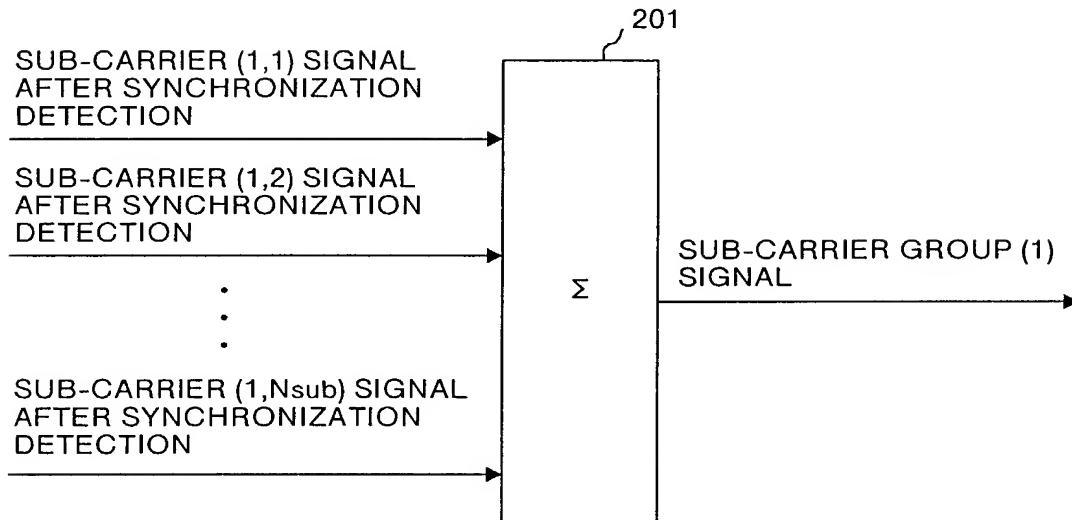
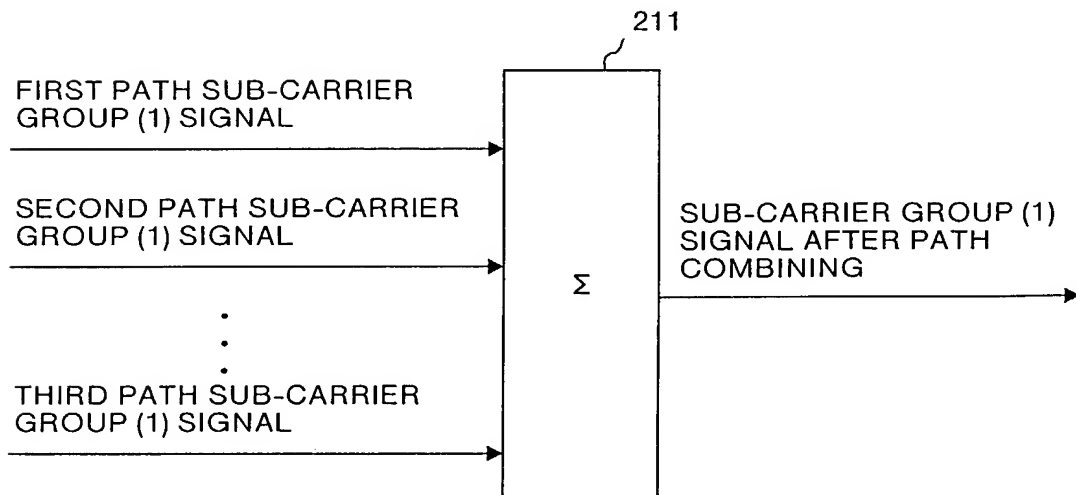
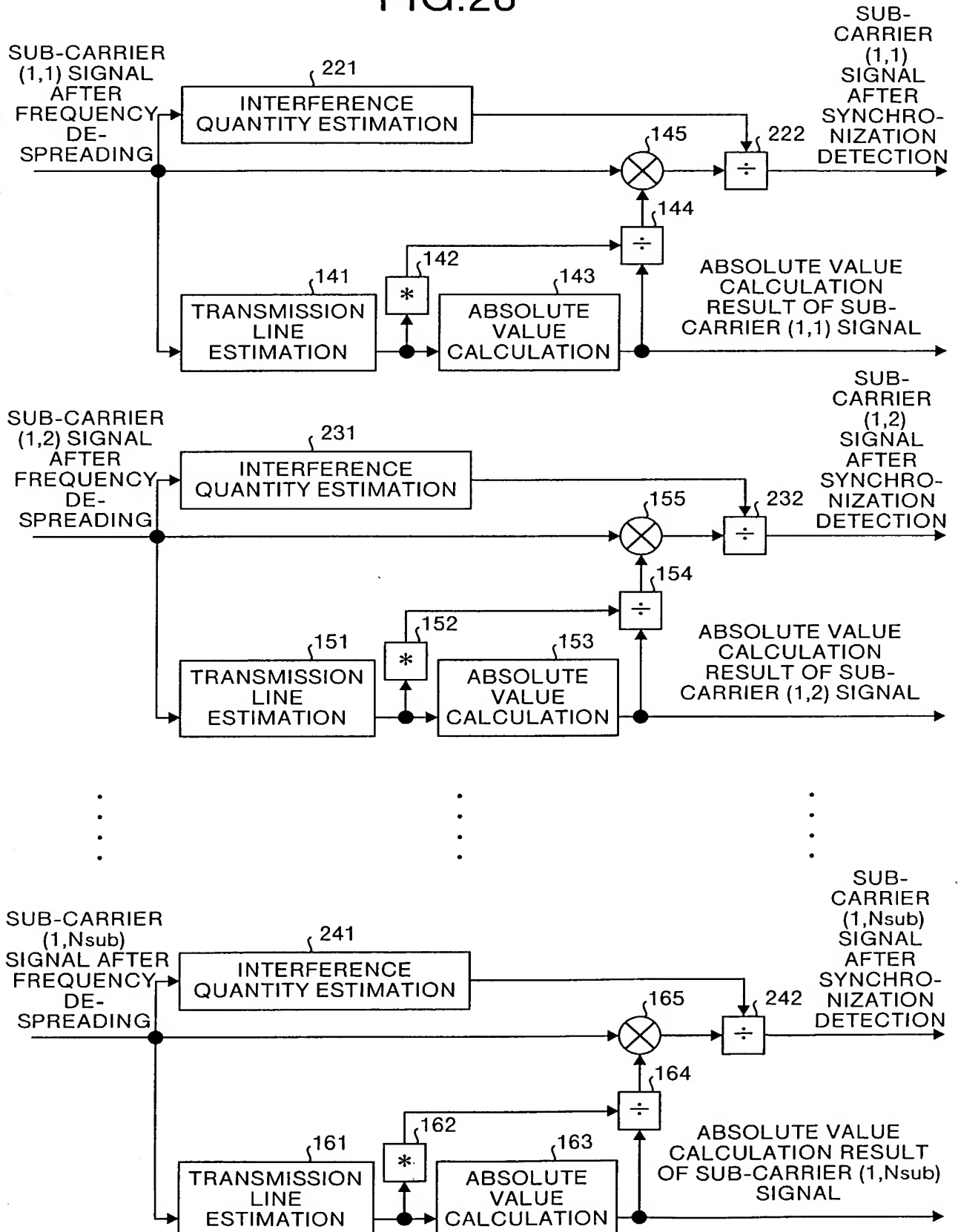


FIG.25



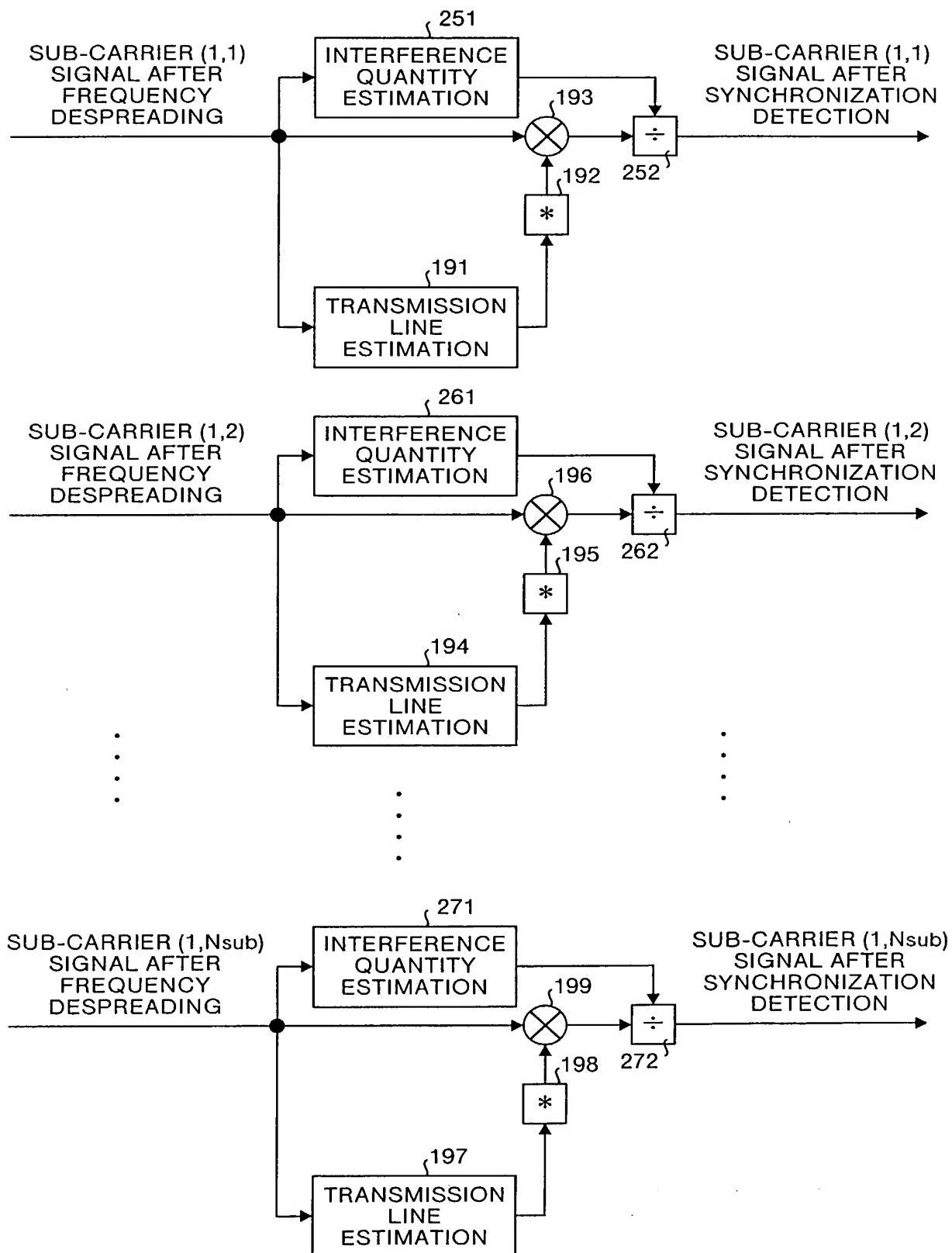
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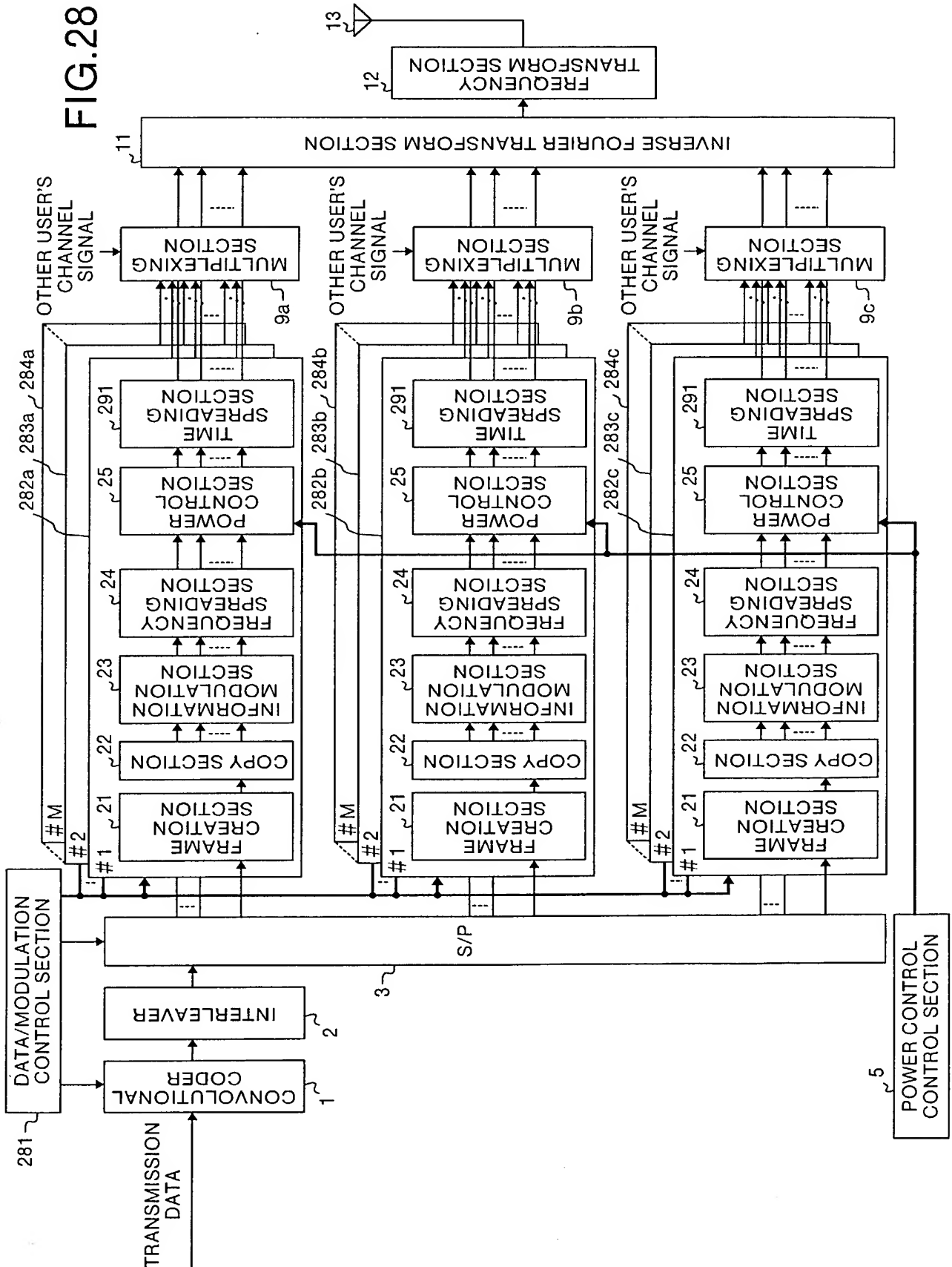
FIG.26



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FIG. 27





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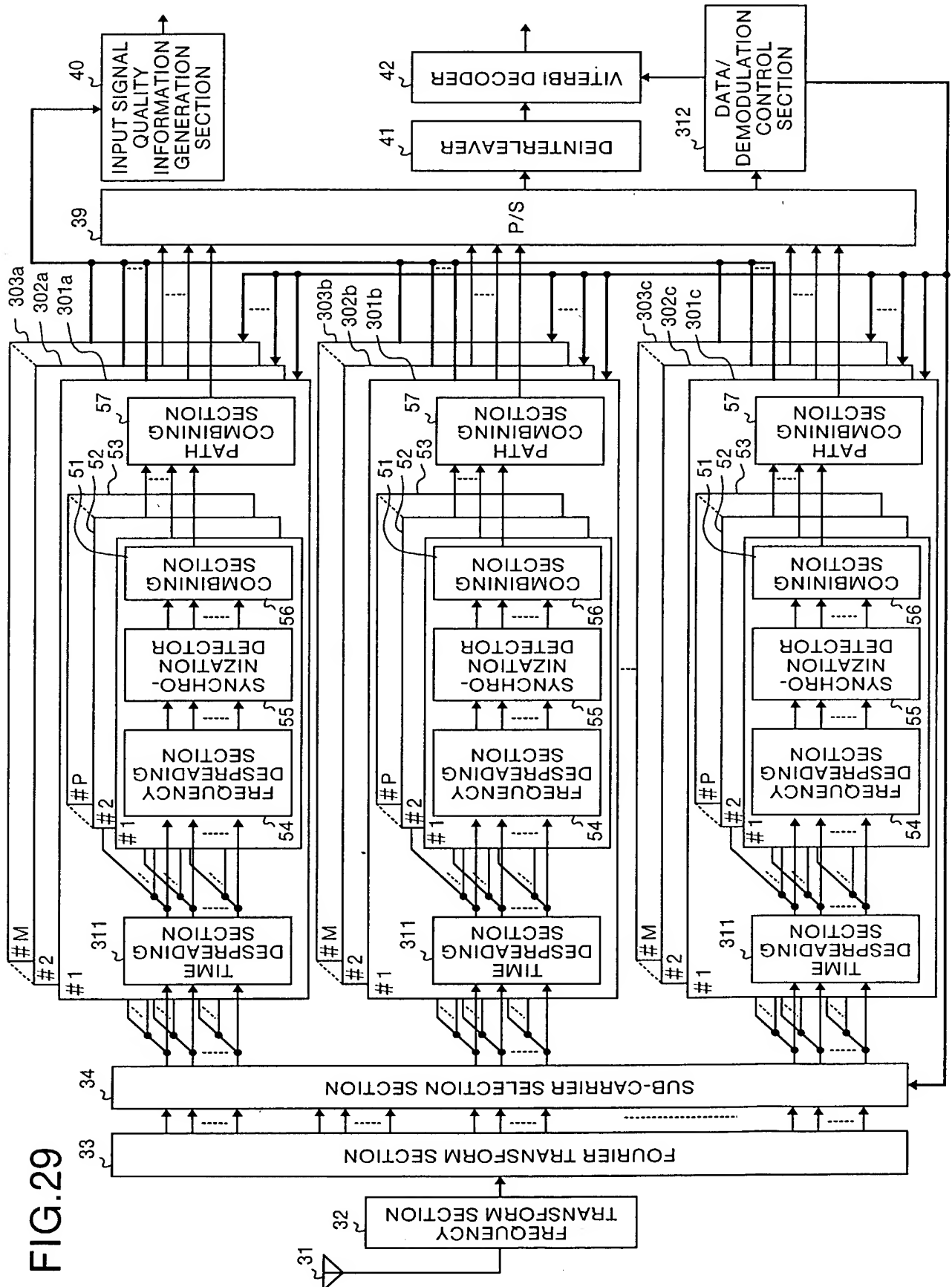
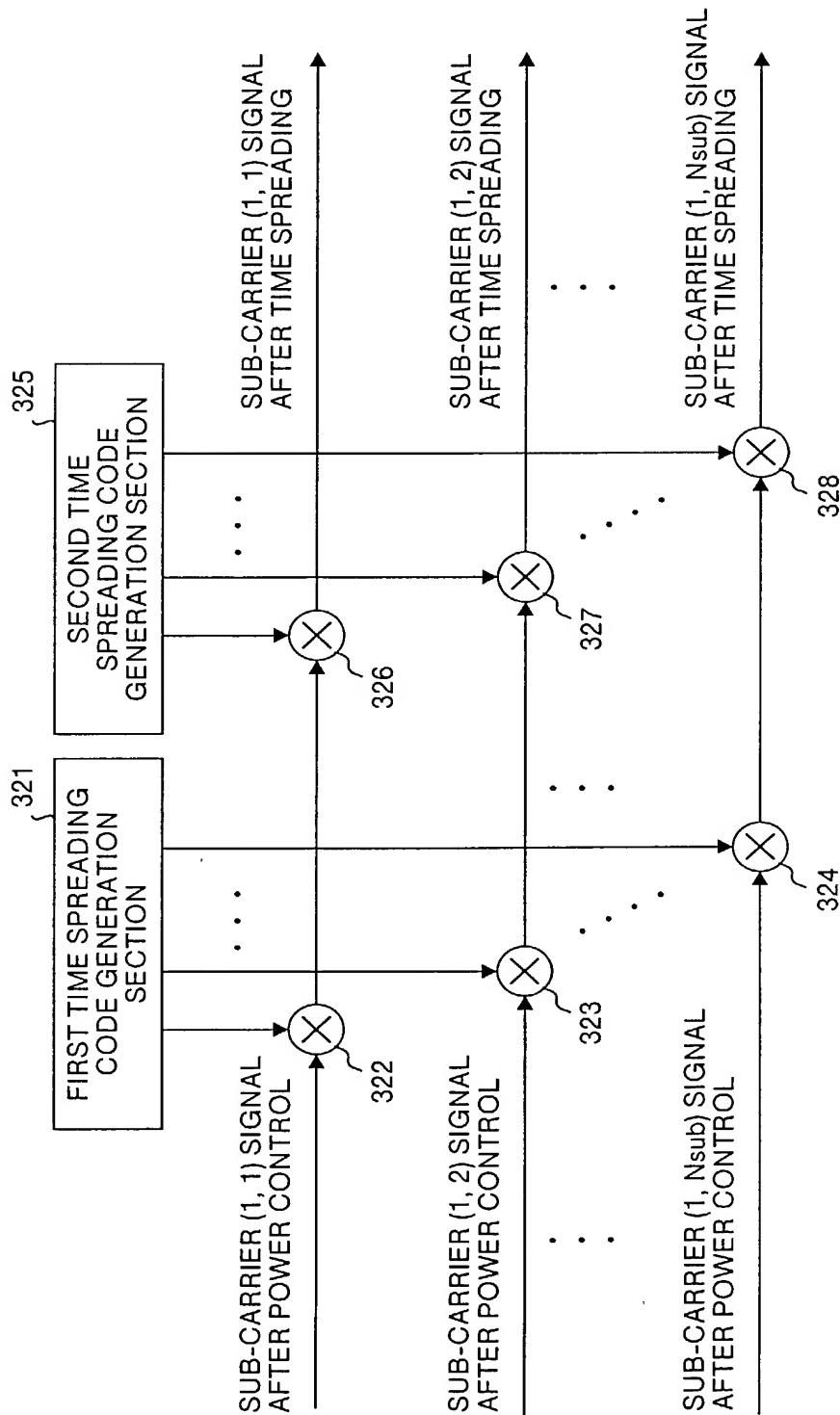
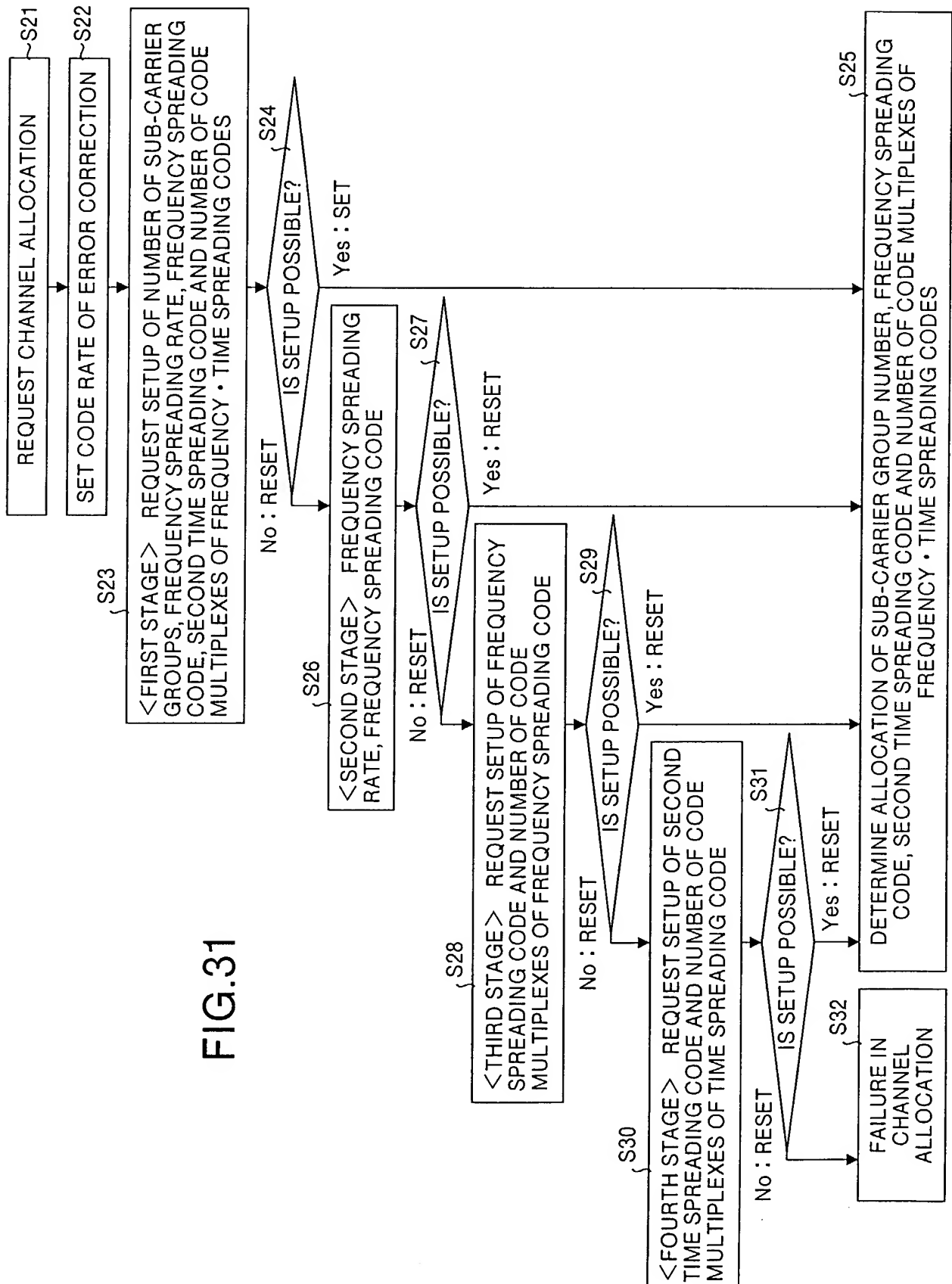


FIG.30





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FIG.32

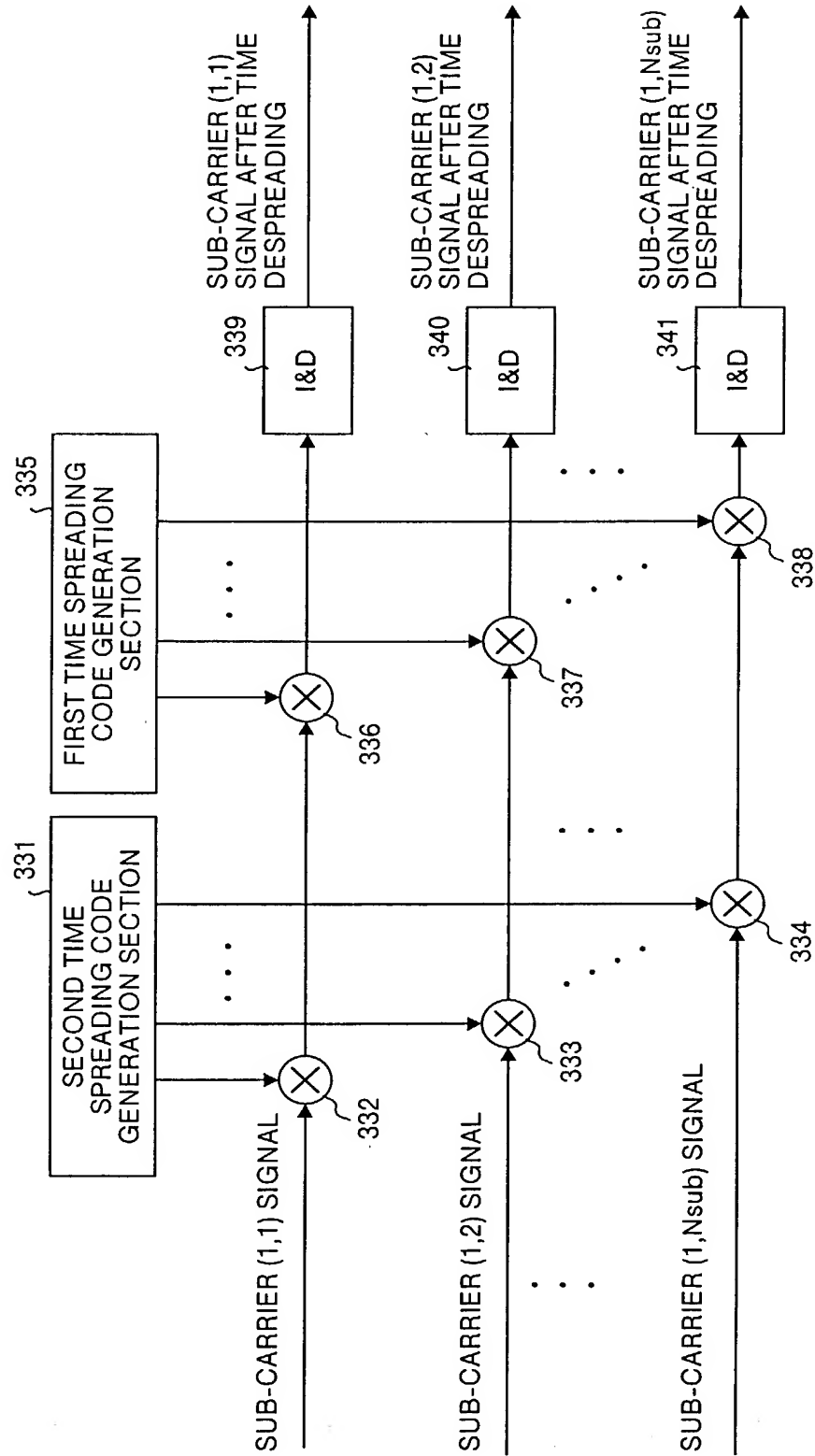
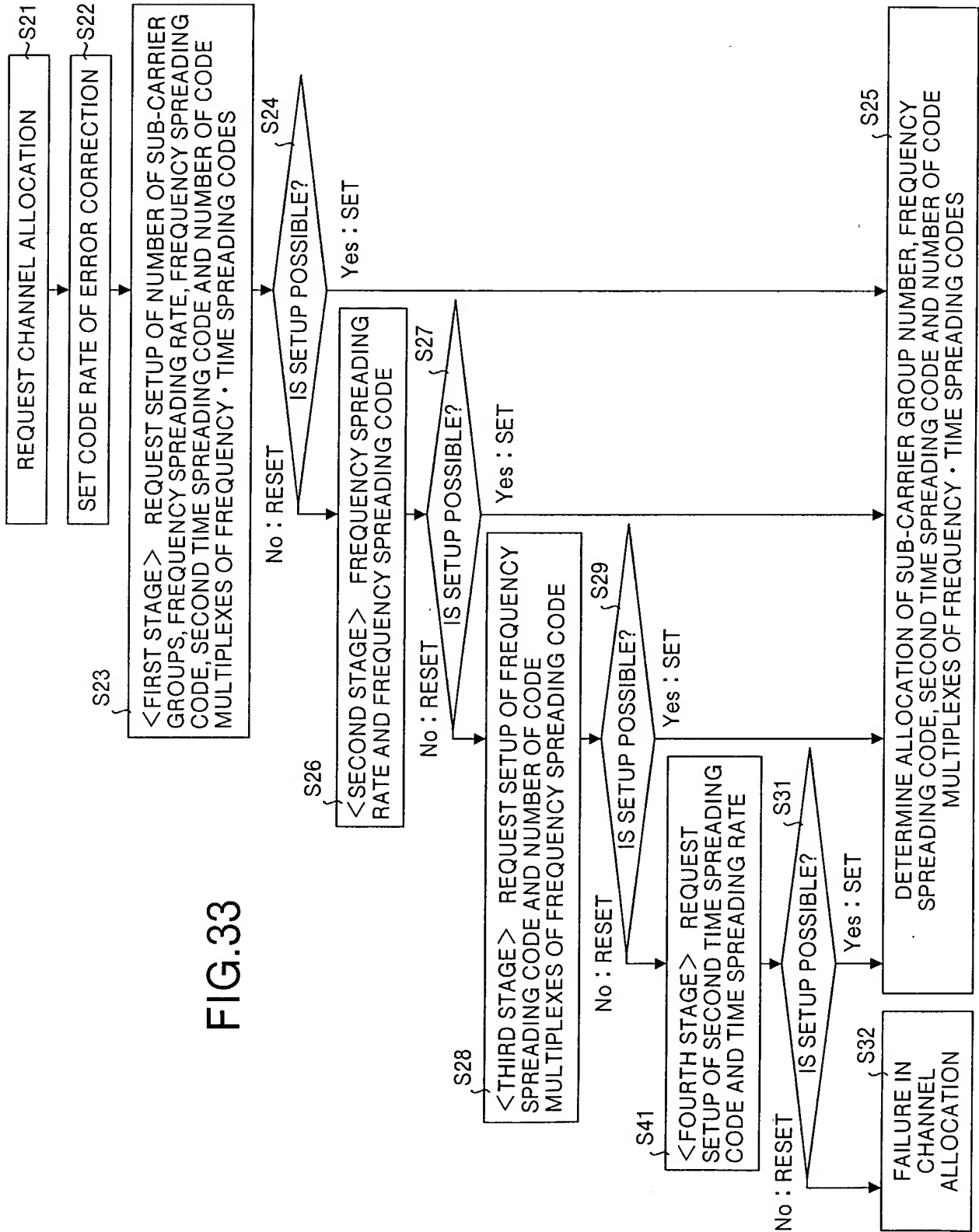
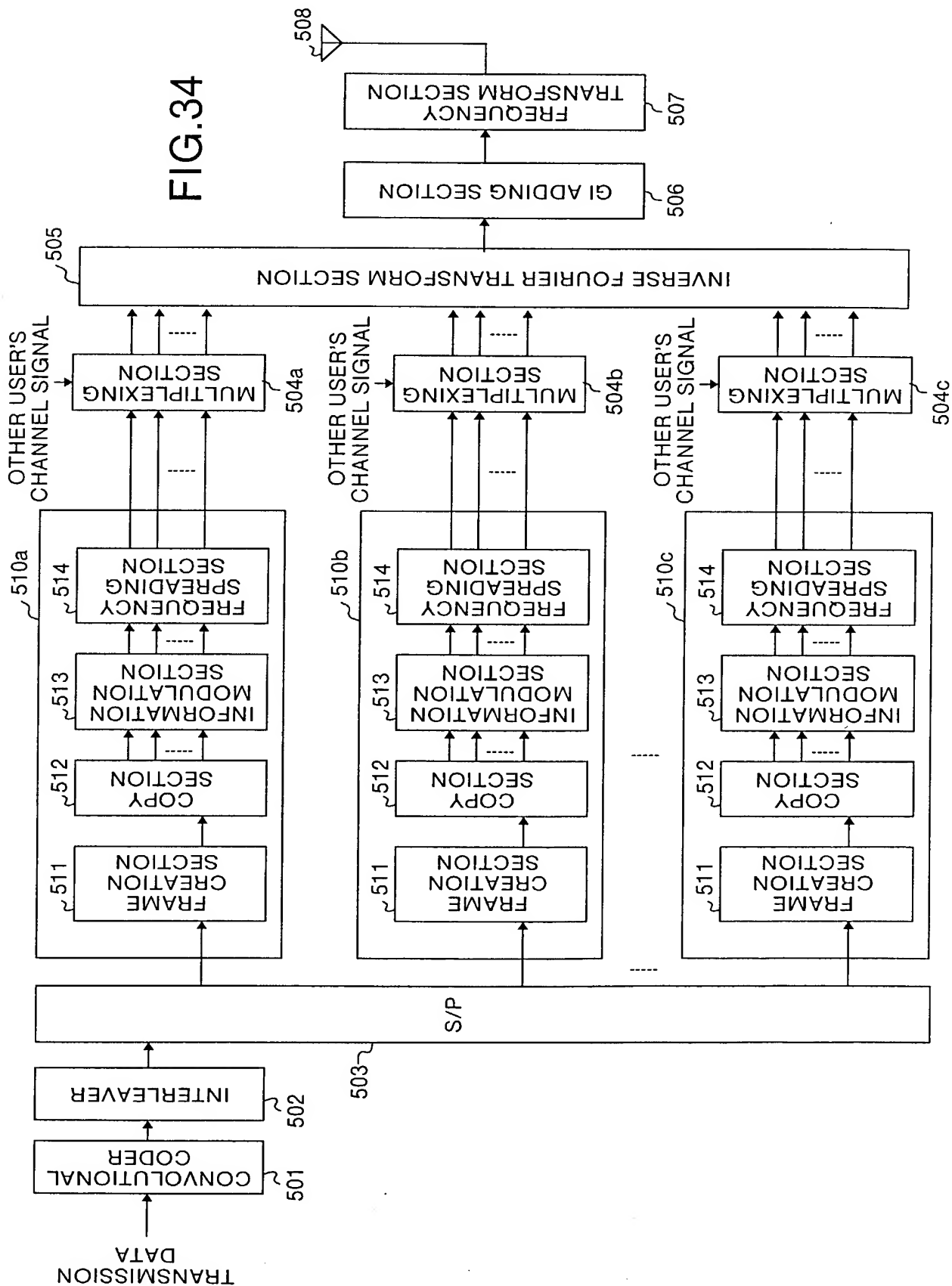


FIG.33



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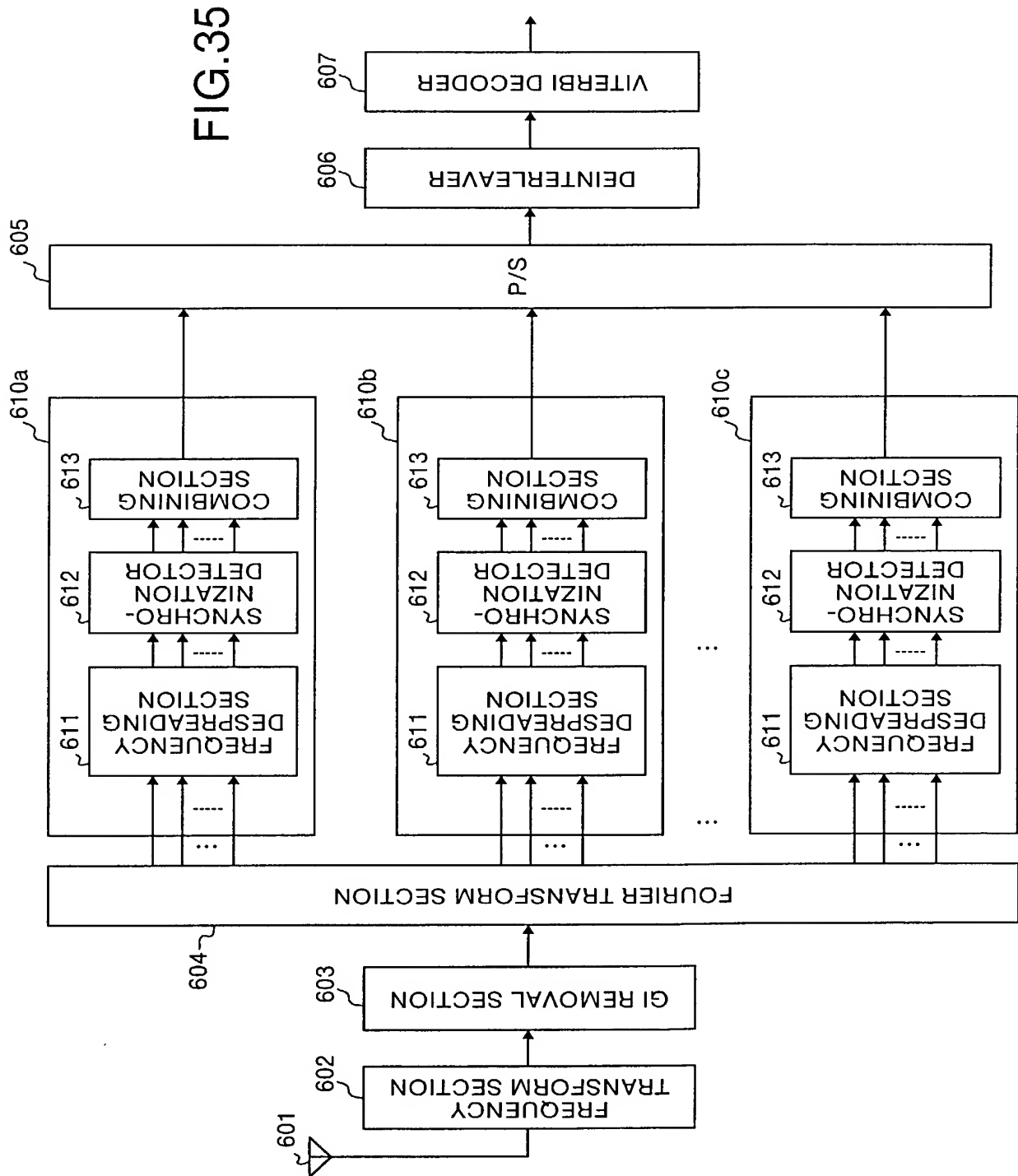


FIG.36

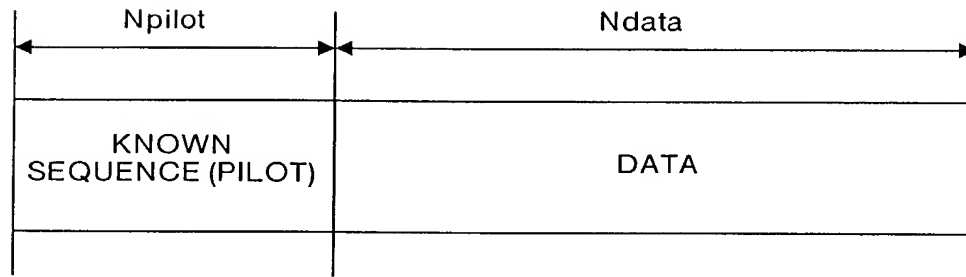


FIG.37

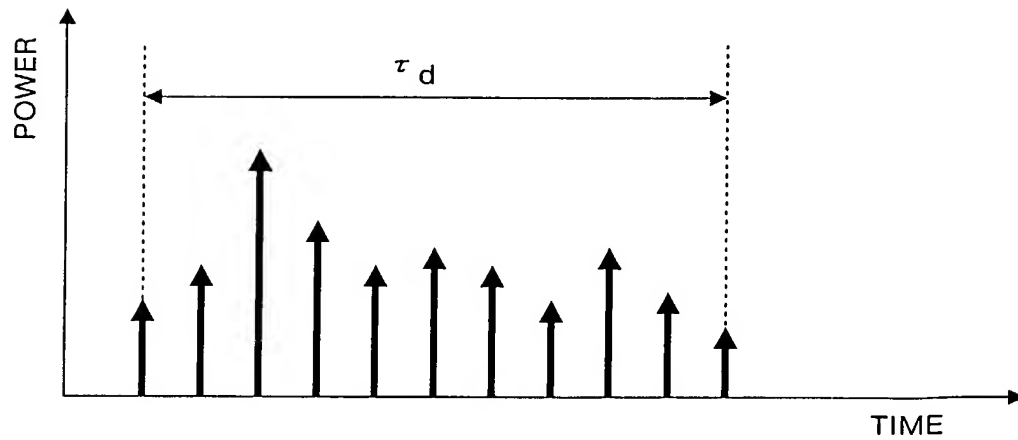


FIG.38

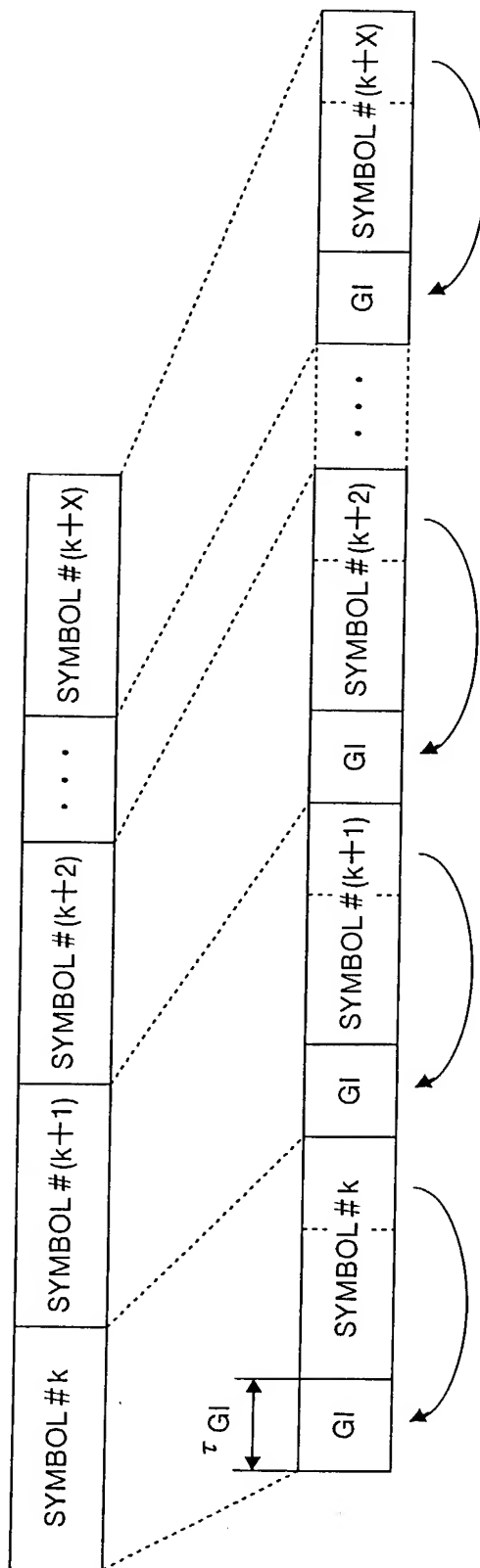


FIG.39

